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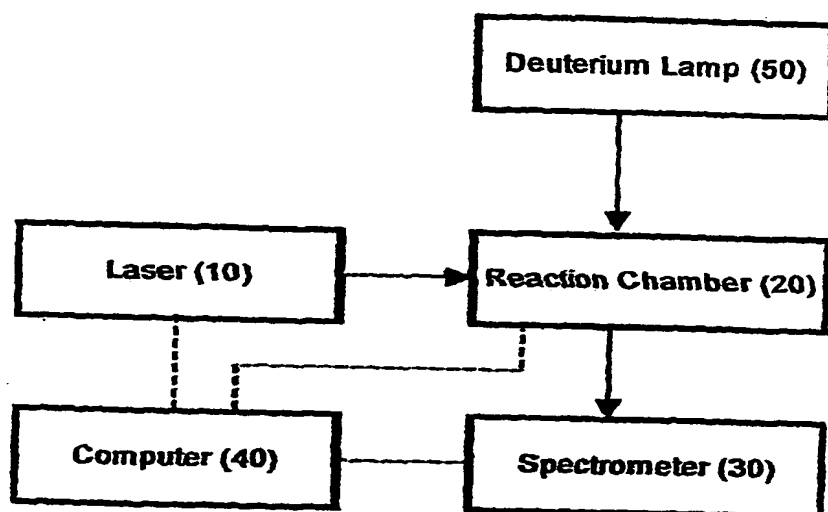
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(54) Title: **ULTRAVIOLET LASER SYSTEM FOR DECOMPOSING CHEMICAL POLLUTANTS**



(57) Abstract: Apparatus and methods are disclosed for using an ultraviolet laser system to decompose selected chemical substances in water. More particularly, this invention provides methods and apparatus whereby various environmental pollutants in water are rapidly decomposed to very low concentrations, consistent with environmental discharge regulations, use requirements, and/or applicable health standards, by means of exposure to ultraviolet laser irradiation (10, 20), either with or without one or more catalysts and/or other chemical additives to facilitate or enhance the decomposition process.